

UNIVERSITY OF PENNSYLVANIA
The Wharton School

Corporate Valuation
FNCE207

Robert W. Holthausen
Autumn, 2019

DETAILED COURSE OUTLINE

Office: Steinberg-Dietrich Hall 1332

Telephone Number: 215 898-7781

Office Hours: Monday: 3:30 pm - 4:50 pm
Additional Hours by appointment. Just email me.

The TAs and their office hours for this course will be announced in the next week.

EMAIL: holthausen@wharton.upenn.edu or holthaus@upenn.edu

I will answer email that can be answered with a simple reply (for example, "yes" or "no" or a few sentences). I will not answer emails that require long explanations. In those cases, I will ask you to call me or see me in my office.

1. Course Objectives.

The objective of this course is to learn firm, debt, option and equity valuation methods from both a conceptual and practical framework. The approach combines both accounting and finance into a practical framework for valuing firms, debt, options and equity. While there is some new finance theory introduced in this course, the emphasis is on the practical application and integration of finance and accounting concepts to valuing real companies using real data. We will discuss standalone valuation and LBO valuation. The course utilizes extensive and detailed readings, exercises, a valuation project in three parts, and a midterm and final exam

The subject matter of this course is relatively technical and difficult. Students who took this course in the past have indicated that the workload for this course is demanding relative to other courses. Because of the technical nature of the course, it does not appeal to all students and is only recommended for those students who are interested in learning valuation techniques in depth. Students interested in broader topical coverage and a less detailed examination of valuation techniques should consider Advanced Corporate Finance (the corporate finance case course). **Students who hoped to never see a financial statement again should not take this course. In fact, students with weak accounting and finance backgrounds will feel at a disadvantage in this course. Working knowledge of Microsoft Excel is also important.**

My goal in this course is to give you a through grounding in the theory and practice of valuation. From time-to-time I will discuss common errors that practitioners make and I will discuss some issues that practitioners often ignore. My view is that you need to fully understand the potential consequences of potential shortcuts you might make in valuing a company. In some cases, those shortcuts are justified because they will have little to no impact on the valuation and would not be worth the time required. In other cases, taking those shortcuts could lead to more serious errors. I will also discuss areas where there is uncertainty about how best to do certain tasks in a valuation. In these situations, I will indicate what is typically done or what is typically ignored and discuss relevant research and court cases in the area, so you at least have an appreciation of the issue and the alternative views on the matter.

This course is designed for students with little or no practical work experience in valuing companies. I do not believe that the "value added" from this course for students who have extensive job related valuation experience is as high as for those with little relevant prior experience, but former students with prior work experience disagree with me on this issue.

2. Minimal Prerequisites.

- A. Introductory Financial Accounting
- B. Introductory Corporate Finance.
- C. Introductory Statistics or Econometrics.
- D. A basic knowledge of EXCEL.

Note, some prior students have indicated that they thought some accounting beyond ACCT 101 (ACCTG 212 and/or ACCTG 242) was valuable. However, many students have succeeded in this course without accounting training beyond introductory financial accounting. Stronger accounting skills will, of course, make some of the material easier to understand and help you interpret a company's financial statements.

3. Course Texts.

- A. Required Text.

The required text is *Corporate Valuation: Theory, Evidence and Practice* by Robert Holthausen and Mark Zmijewski published by Cambridge Business Publishers, 2020, **Second edition** (ISBN: 978-1-61853-324-1). The book is substantially revised relative to the first edition. It includes new data, new analysis, discussion of new accounting standards that are germane to valuing companies, and incorporates the Tax Cut and Jobs Act of 2017 which fundamentally alters how we deal with certain issues in valuation such as interest tax shields and NOLs. I do not recommend buying a used copy of the first edition given the extensive rewriting of the book, the new tax code, and your ability to rely on the book as a reference source during the midterm and final exams. The book is available through the bookstore. (There is also a paperback version of the second edition with a 2019 copyright date (ISBN: 978-1-61853-238-1) which may be available in the used market that is also suitable for the course). There is a reserve copy available at Lippincott Library.

PLEASE NOTE: Exams are open book (just the HZ book). If you buy an electronic version of the book, you will not be able to use a computer or tablet to access the book during the exam. For those not purchasing a book or buying an electronic version of the book, I have a few additional books I can lend to students on a first-come first-served basis but I cannot guarantee that there will be enough copies of the book during exam periods.

Students should read the relevant material before class. Unless otherwise specified, students will be held responsible for all material in the text, whether covered in class or not.

Note that the Appendix to the book is available on the course website.

- B. Other Material

There will be a minimal number of class handouts. If you should miss a handout, extra handouts will be on file in the filing cabinet outside my office door (Steinberg-Dietrich Hall 1332).

- C. Course Website (Canvas)

Through the course website, students will be given access to certain materials. There will be hard

valued excel files provided for the chapter examples and the problems in the book (these are the underlying data for the chapter examples and problems), solutions to the end-of-chapter problems, a few spreadsheets that perform certain calculations discussed in the book, an errata, syllabus and the valuation project write-ups. At the current time, the errata contains only four known errors, so it might be useful to note them in your copy of the book immediately.

In addition, there will be copies of the PowerPoint slides I will use available on the course website as well. These will not be distributed in hard copy, so students wishing to have them prior to class, can print them out. The final version of these will be available by at least 9:30AM on the day of class. There will generally be three copies of the PowerPoint slides (2, 4 and 6 slides per page). In some cases I may create slides that are just one per page because of small print in tables and graphs.

D. Other Potentially Useful but not Required Texts.

Any beginning financial accounting book can help you refresh some of the basics of accounting. Many of you may already own Financial Accounting for Undergraduates by Dyckman, Hanlon, Magee and Pfeiffer (Wharton Custom Edition). Any current intermediate accounting book could also be useful, such as Intermediate Accounting (16th edition) by Donald Kieso, Jerry Weygandt and Terry Warfield (John Wiley and Sons) which is used in ACCT 212. These are good reference books which you might want to own if your intended career will require you to read and comprehend financial statements (e.g., equity analyst, valuation work, etc.), or if you need help with the accounting aspects of the course. If you already own another book with the same topical coverage, it is not worth buying either of these as other accounting texts that you may already own may help you with the accounting aspects of the course as well.

McKinsey & Co., Tim Koller, Marc Goedhart and David Wessels, Valuation: Measuring and Managing the Value of Companies, Sixth Edition, John Wiley & Sons. This is a valuation book written largely from a manager's perspective, but not an investment banker's perspective.

The course does not rely explicitly on these texts so you should only purchase them if they are a useful addition to your library.

4. Grading.

Grading in the course will be based on the following criteria:

Valuation Project – Part I	15%
Valuation Project – Part II	20%
Valuation Project – Part III	15%
Midterm Exam	20%
Final Examination	30%
Total	100%

I anticipate giving an overall GPA of approximately 3.25 across all my students but that may be adjusted up or down depending on class performance. Both sections are pooled together for grading.

The deadline for dropping a finance course is different from the University drop deadline for undergraduates. If an undergraduate student drops after that date, a “W” will appear on his or her transcript. Make sure you know that date if you are contemplating dropping.

A. Class Participation and Attendance

Some classes require you to be prepared for class discussion (discussion of assigned problems), while other classes will be more lecture format. During lectures, I encourage you

to ask questions and I will ask you questions about the material. Voluntary class participation is expected, however, I will cold call on individuals in class from time to time. Participation will affect students' grades who wind up near a grade boundary; potentially moving them up or down.

The education experience for everyone suffers if participation or attendance for the class becomes a problem. If attendance or participation lags, I reserve the right to change the grading criteria in the middle of the semester to weigh class participation and attendance in the grading scheme (retroactively).

B. Name Cards

In order to get to know your names, I would like students to display name cards in class at all times. Please write your name in large, dark letters on the name card. **Failure to display a name card will ensure that I call on you.**

C. Midterm and Final Examination.

The midterm exam will be administered on **Monday, November 4, 2019 from 6:00 pm – 8:00 pm**. The midterm will be "open book" meaning you can bring the HZ book. You may not bring any other material. The midterm covers Chapters 1-10.

The final examination will be administered **Monday, December 16, 2019, from 6:00 pm - 8:00 pm**. I do not have control over the timing of the final examination as it is set by the University. The final exam will again be "open book" meaning you may bring the HZ book. **No other material is allowed.** The final examination is cumulative and covers all material covered in the course.

Please see the note on page 2 of the course outline regarding the use of electronic versions of the HZ book during exams.

In 2017, the class took two quizzes and a final exam. The first quiz covered chapters 1 to 3 and the second quiz covered chapters 4 to 10. Because of the academic calendar this year and last year, I went back to a midterm and a final exam. Given the coverage of the midterm exam, the quizzes will be appropriate review material for the midterm exam. Quizzes, exams and suggested solutions from the last two years will be made available on the class website. I will update the solutions for the revised text before uploading them. **Note that many solutions to prior exams that are available from other sources will not be current given the change in the tax law and given the new material in the book.** I will not provide solutions or answer questions about quizzes and exams that are more than two years old.

Please note the scheduling of the midterm and the final exam. You must ensure that you are available and on campus for the midterm (November 4) and the final exam (December 16). I will not permit anyone to take exams at another time unless you are gravely ill, face a significant emergency or have a class or exam conflict. If your travel plans conflict with the date of an exam, you should change your travel plans now, or drop the course.

Please advise potential employers that you cannot schedule interviews that conflict with your exam schedule.

You are responsible for letting me know by September 18 of any conflict with the midterm or final examination.

D. Chapter Exercises and Valuation Projects

Students will hand in the three parts of their valuation project. Late assignments will not be accepted. Students must turn in a hard copy of their assignments prior to the start of class. All parts of the valuation project also require electronic submission and the write-ups will alert you to that requirement.

Note that the problems and the valuation project are marked on the outline as either D or D & S. If marked D, it means you must be prepared to discuss the problem in class though it will not be submitted. If marked D & S, you must be prepared to discuss the project and you must submit a hard copy at the beginning of the class and submit it electronically

You may work individually or in teams of up to **four individuals** on the valuation projects that are submitted. If you work as a team, all members of the team will receive the same grade on submitted work. No team can have more than four members (more on teams later). You may also work in teams on the discussion problems.

The first page of a submitted project should indicate the names of the individuals participating in the grade, the section number of each student **and the team number. It is very important to include the team number on each submitted project.**

More Details on the Valuation Project

As part of the course requirements, you will pick a company of your own choosing and value it. There will be a separate write-up of the valuation project available in about a week and the project will be completed in three parts. In the interim, you should consider what company you want to value. There are several criteria that you should keep in mind in choosing a company to value. Numbers 1 to 4 below are requirements. Numbers 5 to 8 are suggestions.

1. This has to be a company that you and your teammates have not done any valuation work on in a prior course or in a job or internship or in any other capacity. In other words, you may not value a company where some of the valuation work or related analysis has already been performed by you or any of your teammates.
2. The company you pick should be publicly traded and there should be **at least** three years (preferably more) of historical data available for this company (financial statements and stock returns).
3. There should be **at least** three (but preferably more) publicly traded competitors who are in the same business. It is best if these are “pure-plays” (e.g. only in the business of the firm being valued).
4. The company must have some interest bearing debt.
5. I strongly urge you to pick a company that is in a single line of business as valuing diversified companies like General Electric is challenging from just publicly available data.
6. You do not have to pick a purely domestic company, but valuing companies that are truly multinational in nature is challenging from just publicly available data.
7. You should pick a company where you believe you have some ability to create reasonable forecasts. In other words, picking a technology company where the

technology is unproven and the demand for the technology is highly uncertain is going to create special challenges in forecasting.

8. Restaurant chains, retail chains, hotel chains, etc. often make good candidates as they are often in a single line of business, typically have many publicly traded competitors, generally have interesting ways in which to model revenue growth and CAPEX, and are often primarily domestic. There is no requirement however to pick a company in one of these industries. Prior students have selected companies outside these industries such as railroads, utilities, service businesses, cruise lines and more. While I suggest you pick a company that is primarily domestic, that doesn't mean it has to be a U.S. company, but be aware that getting data on the company and competitors may be more difficult for companies outside the U.S.. You should pick a company that you find interesting, as this will be something you work on throughout the semester.

You and your team should begin to think about what company you want to value. Additional information about this project will be available in a week. You need to have registered as a team and you must inform me no later than September 11 regarding the name of the company you are valuing. It would be wise however, to pick your company well in advance of that date as Part I of the project is due October 2. You may switch companies after September 11 if you run into issues that make the analysis difficult. Switching companies after Part I is submitted is allowed, but will increase your workload as Part I of the valuation project is a necessary component of the forecasts you will make in Part II.

5. Attendance and Class Etiquette

Students should attend the section of the class for which they are registered. Students are expected to attend class throughout the semester. In the case of a **rare conflict**, students can attend another of my sections. I teach the same class at 10:30 and noon in SHDH 109 on Mondays and Wednesdays. If you attend a different section of the class, do not take a seat from a student registered for that class. You should notify me by 9:30 AM by email if you are planning to attend a different section.

Students are expected to arrive on time for class. Once in class, students should remain until the class is completed. Arrivals and departures during class time interfere with the educational process and are not fair to the other students or myself. If you must schedule an interview on-campus during class, do not come to class for part of the period. Instead, please attend another section.

6. Workload

The subject matter of this course is quite technical and difficult. Students in past years have indicated that the workload for this course is heavy. Because of the technical nature of this course, the course does not appeal to all students. I believe in communicating the complexity of the issues one faces in valuation. I will rarely gloss over something even if it is difficult.

7. Relation to Advanced Corporate Finance (the corporate finance case course)

The Corporate Valuation course concentrates on valuation issues only and looks at valuation issues in detail. This means we will discuss topics like how to analyze a company's historical data, estimating free cash flows, building a financial model, estimating the cost of capital, leveraging and unlevering, market multiples and LBO valuation. The Corporate Finance Case course generally examines a variety of issues such as working capital management, optimal capital structure, dividend signaling, capital budgeting and valuation. Thus, while the corporate finance case course deals with some valuation issues, it does not look at them in as much detail and generally uses cases whose data has

been sanitized and simplified (something that never happens in the real world). However, the corporate finance case course has broader topical coverage.

8. Academic Integrity

Students are expected to follow the rules of academic honesty in this class. This means that examinations are to be the work of the individual student using only the material permitted during the examination. Regarding submitted valuation cases, the work should be the work of *only the team members* reported on the front of the case. **Students should not in any way rely on projects submitted by prior students or current students that are not members of their team.** When a valuation case requires you to produce a forecasting or valuation model, the use of a forecasting or valuation model not created exclusively by the student team for this course is a violation of the codes of academic integrity. In other words, for all submitted projects, you must start with an excel spreadsheet which is at most populated with some historical raw data. **If you have questions concerning this policy, please see me for a clarification before you use any questionable material.**

Please note that if you violate this policy, failing the class will constitute the minimum penalty, regardless of the degree of your violation.

9. Teams

The valuation cases can be worked on individually or in teams of up to four students. Students may form teams across the two sections. Teams of five or more are not allowed (no exceptions). I encourage you to work in teams to maximize the learning experience. I will not become involved in any group problems. Teams may change composition during the course of the semester. If a set of teammates decides they can no longer work together, they are free to separate. If any member of the team cannot find another suitable team to join, he or she will have no choice but to hand in the rest of the valuation cases individually. In choosing teammates, consider the skills your team will want to possess: accounting, finance and excel modeling expertise. Also make sure that your teammates' expectations for their performance in this course are consistent with your expectations for yourself. Finally, if you have a particular industry from which you want to pick a company to value, make sure your teammates are on board with that choice. **Please sign up for a team no later than Wednesday, September 11.** Details on the team signup will be contained in the write-up of the valuation project.

NOTE: ASSIGNMENTS AND DATES ARE SUBJECT TO CHANGE

Class #	Date	Topic	H&Z Corporate Valuation Chapter	Assignment (Problem Numbers from H&Z Book)
1	August 28, 2019	Introduction to Course and Valuation	1 & App. (on Canvas)	
2	September 4, 2019	Ch 1 cont'd & Financial Statement Analysis		1 & 2
3	September 9, 2019	Ch 2 cont'd & Measuring Free Cash Flows		2 & 3
4	September 11, 2019	Measuring Free Cash Flows		3 D - 3.2 S - Team Composition & Company Name Required
5	September 16, 2019	Measuring Free Cash Flows		3 D - 3.9
6	September 18, 2019	Creating a Financial Model.		4
7	September 23, 2019	Ch 4 cont'd & The APV and WACC DCF Valuation Methods		4 & 5
8	September 25, 2019	The APV and WACC DCF Valuation Methods		5 D - 5.4
9	September 30, 2019	Excess Earnings Valuation Method		7
10	October 2, 2019	Measuring Continuing Value Using the Cash Flow Perpetuity Model		6 D & S - Part I of the Valuation Project - 15% of grade
11	October 7, 2019	Ch 6 cont'd & Estimating the Cost of Equity Capital		6 & 8 D - 6.7
12	October 9, 2019	Estimating the Cost of Equity Capital		8
13	October 14, 2019	Measuring the Cost of Capital for Debt and Preferred Securities		9
14	October 16, 2019	Measuring the Cost of Capital for Debt and Preferred Securities		9
15	October 21, 2019	The Effects of Financial Leverage on the Cost of Capital		10
16	October 23, 2019	The Effects of Financial Leverage on the Cost of Capital		10 D - 10.1, 10.7
17	October 28, 2019	Measuring the Weighted Average Cost of Capital and Other Issues		11 D & S - Part II of the Valuation Project - 20% of grade
18	October 30, 2019	Ch 11 cont'd) & Option Pricing Model Applications to Valuation		11 & 12
19	November 4, 2019	MIDTERM EXAM 6PM TO 8PM CHAPTERS 1 to 10 - 20% of grade		NO CLASS DURING REGULAR CLASS TIME
20	November 6, 2019	Option Pricing Model Applications to Valuation		12
21	November 11, 2019	Introduction to Market Multiple Valuation Methods		13
22	November 13, 2019	Market Multiple Measurement and Implementation		14
23	November 18, 2019	Market Multiple Measurement and Implementation		14
24	November 20, 2019	Leveraged Buyout Transactions		15
25	November 25, 2019	Leveraged Buyout Transactions		15 D & S - Part III of the Valuation Project - 15% of grade
	THANKSGIVING BREAK (Note that Monday/Wednesday classes do not meet on Wednesday, November 27)			
26	December 2, 2019	Student Presentations		
27	December 4, 2019	Student Presentations		
28	December 9, 2019	Student Presentations and Review		
	December 16, 2018	FINAL EXAM - CUMULATIVE from 6:00 to 8:00 PM - 30% of grade		